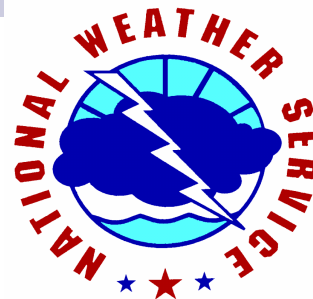




National Weather Service Aberdeen, South Dakota



January 2010

Inside this issue:

First Major Storm of 2010 1

A Look Back at the Weather of 2009 2

The 2009 Christmas Blizzard 3

End of Winter/Early Spring Outlook 4

The Arctic Oscillation and its Impact on the Region 5

2010 Spotter Training Sessions Coming Soon 6

New Employee 7

First Major Storm of 2010—Jan. 22nd-24th

A powerful mid-season winter storm moved north out of the 4-corners region of the United States into the northern plains. Ahead of this system, warm and moist air streamed northward, creating widespread fog and freezing fog conditions during the days leading up to the event. Heavy frost began to accumulate on power lines and tower guide wires, placing heavy strain on them by the time the freezing rain arrived Friday afternoon and overnight. Along with the freezing rain, southeast winds gusting over 30 mph also created a strain on sagging power wires. Scattered power outages were reported as early as Tuesday due to the frost covered lines, but the majority of power line and power pole damage occurred during the evening of January 22nd and morning of January 23rd. The freezing rain that arrived during the afternoon and evening of the 22nd was the proverbial “straw that broke the camel’s back”. By the time the rain and freezing rain ended Saturday morning, nearly every power cooperative within the county warning area suffered power pole and power line damages, with radio and TV towers falling under the heavy load in Reliance and south of Vayland. Early estimates are that over 5,000 power poles broke across the county warning area...throwing thousands of households into the dark during the storm. Power outages were still being reported up to a week after the event.



A Look Back at the Weather of 2009

The year of 2009 across central and north central South Dakota, as well as west central Minnesota, was dominated by northwest flow, which brought cool to bitter cold air masses across the region from Canada and the Arctic. Therefore, all locations across the area averaged from around 1 to 3.5 degrees below normal for 2009. The lowest temperature for the year occurred on January 15th with the lows across the region in the 20s to 30s below zero. Aberdeen recorded a low temperature of 42 degrees below zero on this date. It is also interesting to note in the 2009 the absence of 100 degree temperatures across the area. In fact, the highest temperatures for the year were in the mid to upper 90s for all locations.

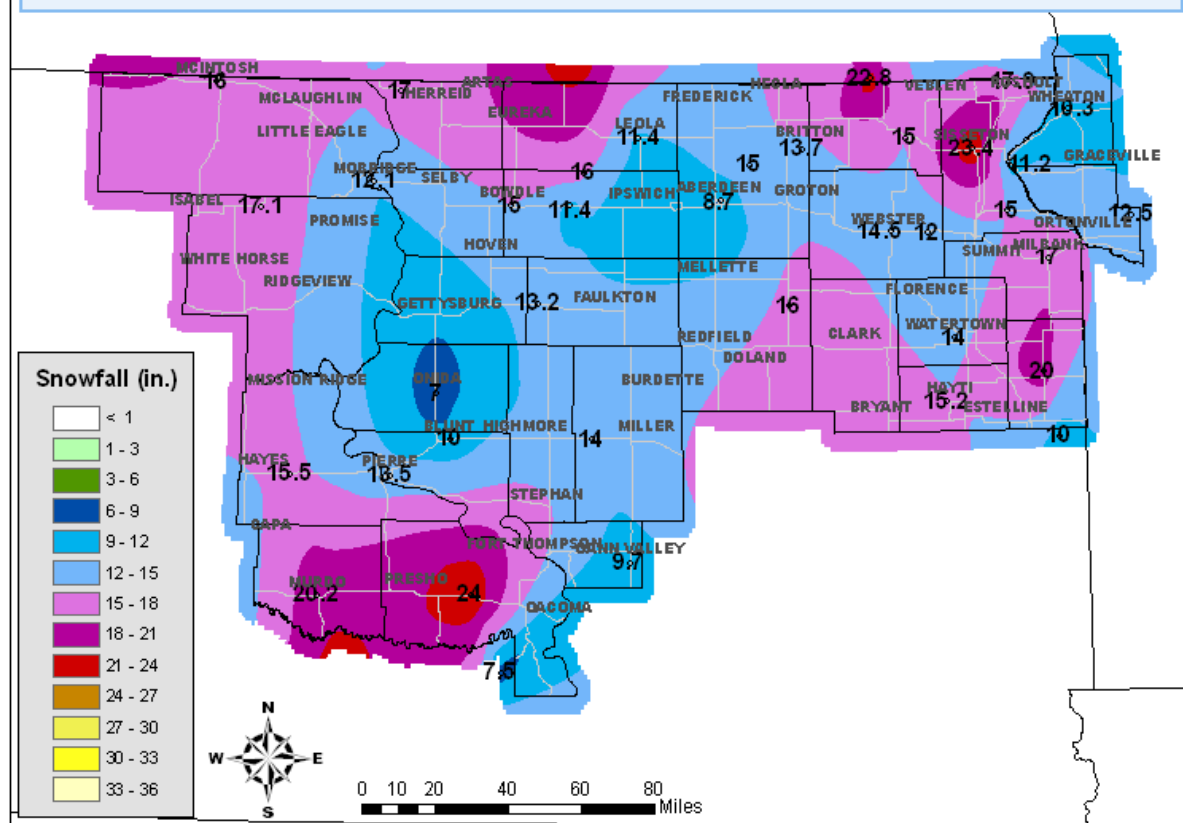
The year of 2009 was not only cooler than normal, but also wetter than normal across central and northeast South Dakota, as well as west central Minnesota. The yearly total precipitation amounts were anywhere from a half inch to over 4 inches above normal. As a result, flooding was an issue, especially across northeast South Dakota and west central Minnesota.

CLIMATE SUMMARY 2009

Temperature Data	Aberdeen	Sisseton	Wheaton	Watertown
Warmest Temperature/Date	96 / May 19th	96 / May 19th	94 / Aug 13th	94 / May 19th
Coldest Temperature/Date	-42 / Jan 15th	-31 / Jan 15th	-30 / Jan 15th	-34 / Jan 15th
Average Yearly High/Departure from Normal	52.3 / -2.8	51.3 / -3.1	50.2 / -4.8	50.9 / -2.0
Average Yearly Low/Departure from Normal	30.2 / -2.2	31.1 / -2.2	30.6 / -2.1	30.9 / -0.2
Yearly Average/Departure from Normal	41.3 / -2.5	41.2 / -2.7	40.4 / -3.5	40.9 / -1.1
Precipitation/Wind Data				
Yearly Precipitation / Departure from Normal	24.27 / +4.05	26.18 / +4.10	24.32 / +1.52	24.67 / +2.73
Highest Wind Gust MPH / Date	55 / Jun 27th	59 / May 20th	N/A	54 / May 13th
Temperature Data	Pierre	Kennebec	Mobridge	Timber Lake
Warmest Temperature/Date	97 / Aug 12th	98 / May 19th	93 / Jul 23rd	98 / Aug 12th
Coldest Temperature/Date	-24 / Jan 15th	-30 / Jan 15th	-33 / Jan 15th	-28 / Jan 15th
Average Yearly High/Departure from Normal	56.6 / -2.8	58.9 / -2.3	53.0 / -3.7	54.1 / -2.1
Average Yearly Low/Departure from Normal	33.6 / -1.9	33.5 / -0.1	31.2 / -1.8	31.1 / -2.2
Yearly Average/Departure from Normal	45.1 / -2.4	46.2 / -1.2	42.1 / -2.9	42.6 / -2.2
Precipitation/Wind Data				
Yearly Precipitation / Departure from Normal	20.90 / +1.02	21.21 / +2.79	19.05 / +2.40	19.00 / +0.39
Highest Wind Gust MPH / Date	61 / Aug 3rd	N/A	55 / Jan 12th	N/A

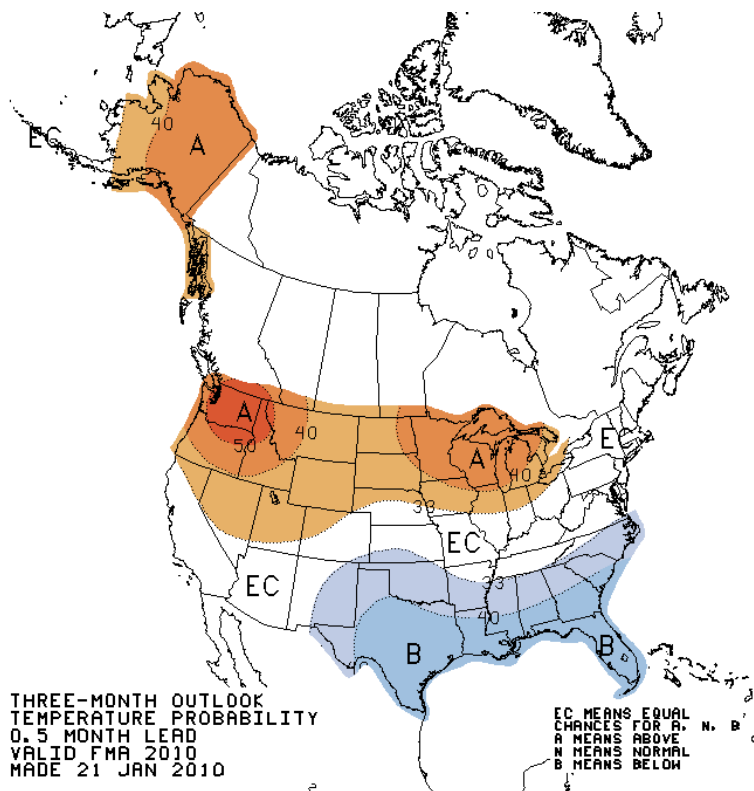
The 2009 Christmas Blizzard

Storm Total Snowfall - Dec 23-27th



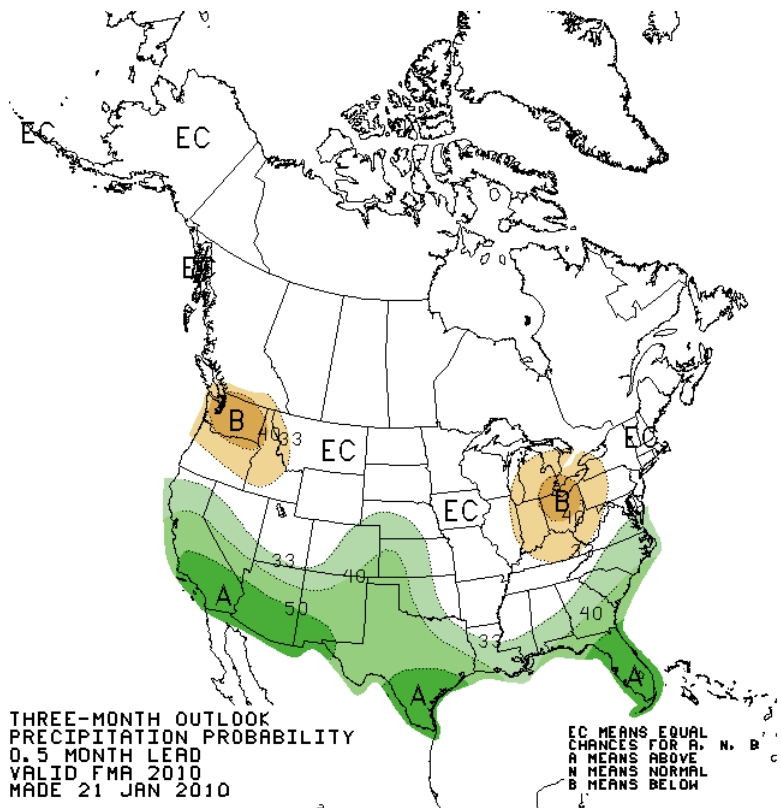
A very strong area of low pressure moving out of the desert SW part of the country moved into northern Texas and northern Louisiana during the morning of Christmas Eve. The low then began to lift northward into Illinois, then backed to the west into central Iowa by Christmas Day. The Christmas Blizzard of '09 would affect families and communities from the southern U.S. into Canada. It gave Dallas, Texas its first official white Christmas in 83 years. It broke the all-time single-storm snow record with 14 inches in Oklahoma City, Okla. Parts of Nebraska, Iowa, Kansas and Oklahoma were left with more than a foot of snow, while areas of North Dakota and Minnesota received more than two feet of snow. Higher elevations in the Black Hills received up to 40 inches of snow (Lead, S.D.), while the eastern part of the state saw snow totals ranging from one to two feet (Aberdeen – 12 inches, Huron – 18.6 inches and Kennebec – 24 inches). Rapid City had Christmas day wind gusts up to 76 mph. The snowfall and wind forced both I-90 and I-29 to be closed from border to border. The storm battered the region for 4 days before it began to weaken and move east away from us. The Christmas Eve/Christmas Day blizzard of 2009 will be one that many people will talk about for years to come.

End of Winter/Early Spring Outlook



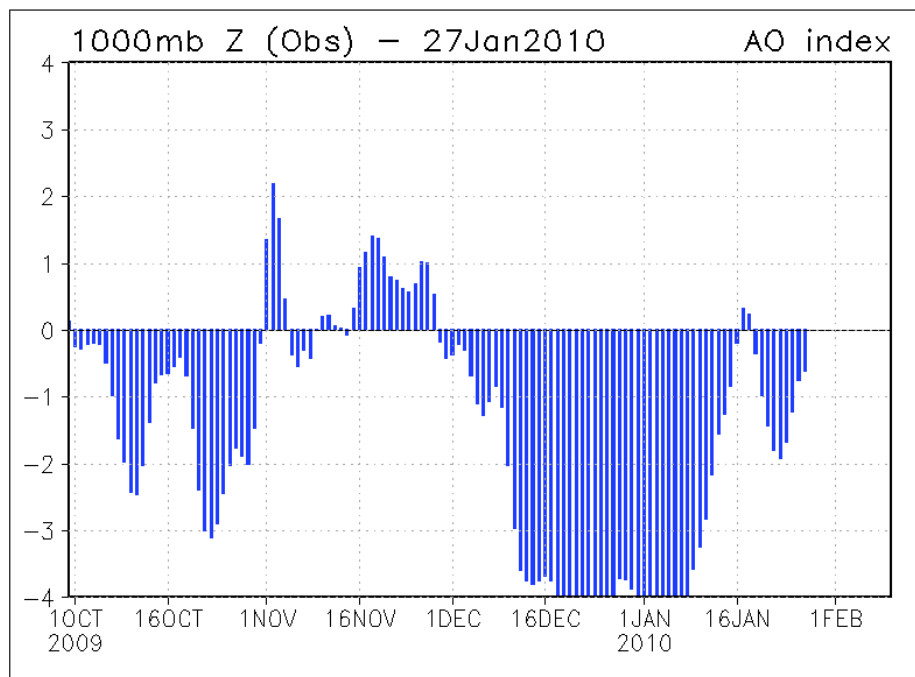
Temperature outlook for February through April...calls for above normal temperatures across the Northern Plains

Precipitation outlook for February through April...calls for near normal precipitation across the Northern Plains.

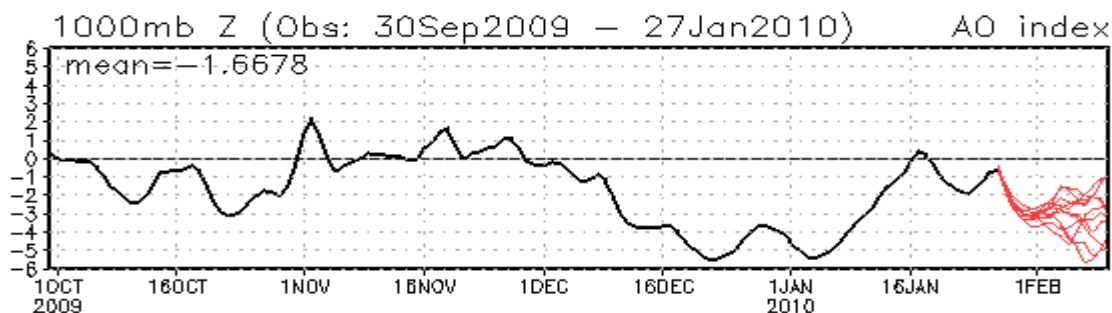


The Arctic Oscillation and its Impact on the Region

The Arctic Oscillation (AO) is an important Arctic climate index with positive and negative phases, which represents the state of atmospheric circulation, or put another way, represents the strength or weakness of the Low pressure systems located over the Arctic. When the AO is in its “positive phase”, lower than normal pressure is found over the polar region. This helps to steer Pacific Ocean storms northward... allowing more mild pacific air to move into the northern plains from the west. Conversely, higher than normal pressure is found across the polar region during the negative phase. This drives storms southward and allows colder arctic air to move south into the region. Below is a graph of the phases through the end of January. During November of 2009, many places experienced a “top-ten” warmest November, correlating well to a positive AO index. On the flip side, December 2009 was a “top-ten” coldest month on record for many places, with some areas setting monthly snowfall records as well. In fact, much of the Northern Hemisphere across the earth experienced a “colder than normal” December.



So, what does the forecast look like for the AO heading into the latter part of the winter? The chart below shows the observed index (black line) along with the model forecast (red line) heading into the middle of February. The models are leaning toward a more negative phase through the middle of February, hinting that another cold spell may be in the offing for the region.



2010 Spotter Training Sessions Coming Soon

It can be difficult to look out the window and think about severe weather, but spring is just around the corner. Skywarn training sessions are now being scheduled across the area. This training, provided for free by the National Weather Service in Aberdeen, and hosted by your county Emergency Manager, is a 1 ½ to 2 hour session on severe weather spotting, thunderstorm identification, and severe weather safety. If you are interested in attending a spotter training class, please see the following web-page:

<http://www.crh.noaa.gov/abr/?n=skywarnschedule.php>. On that page you will find the “where’s” and “when’s” for the training classes. If your club or organization would like to host a severe weather safety, or general weather presentation, please contact Dave Hintz (Warning Coordination Meteorologist) at (605) 225-0519.

COMING SOON

COMING SOON

New Employee

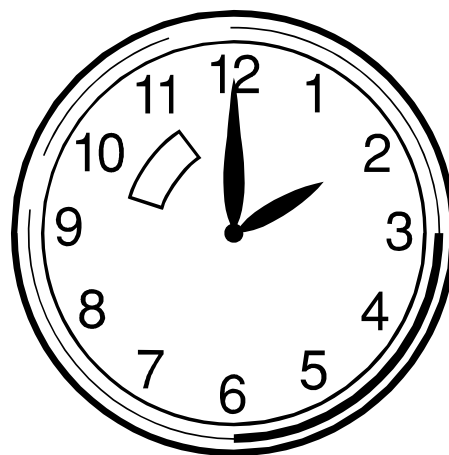
Matthew Gasperich
Electronics Systems Analyst

Matthew Gasperich was selected as the new Electronics Systems Analyst at the Aberdeen Weather Forecast Office. Matt was a former Aberdeen Electronics Technician (ET) who spent the last two years as an ET in La Crosse, Wisconsin. Matt says he's happy to be back in "God's Country."

Welcome

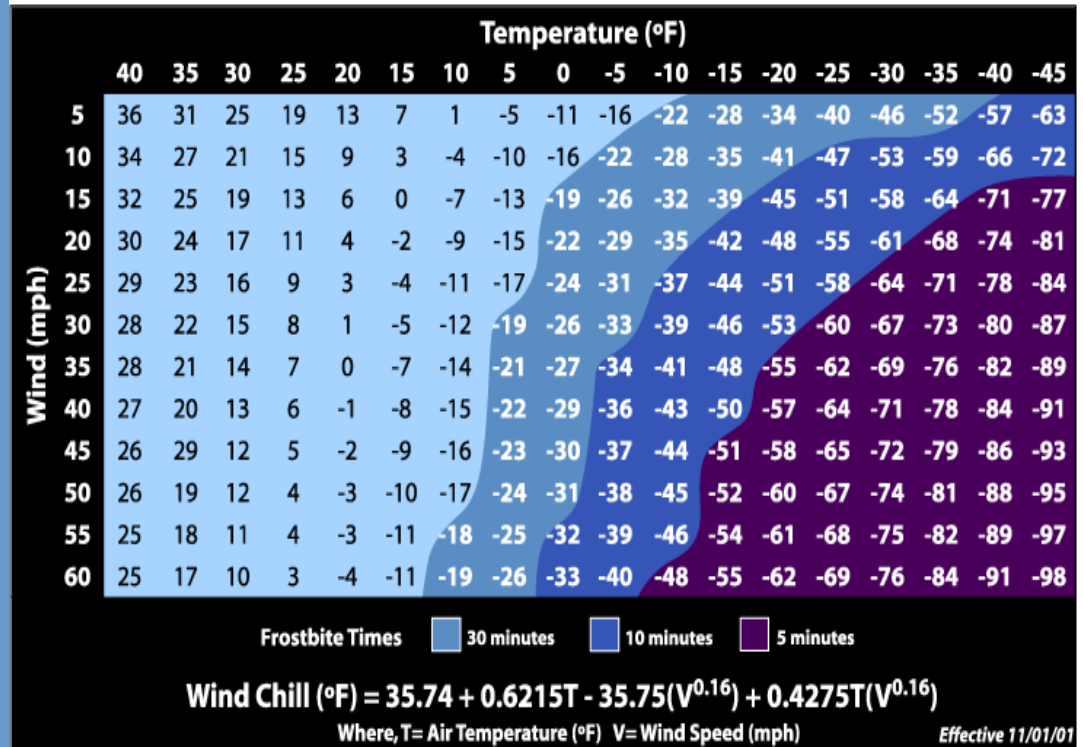
Don't Forget!!

Don't forget to set your
clocks ahead one hour at
2:00 am on March 14th.





Wind Chill Chart



NATIONAL WEATHER SERVICE

824 Brown County 14 South
Aberdeen, SD
57401

Phone: 605-225-0519

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300

www.weather.gov/aberndeen

While I relish our warm months, winter forms our character and brings out our best. ~Tom Allen